

year 147 plates, and over 1,625 laboratory reports were made, which included blood counts, cultures, analysis of secretions, etc.

As all students who matriculate are compelled to have a thorough physical examination, it enables us to inform them correctly as to their abilities for physical exercises, classroom-work, college sports, etc. Numerous defects, focal infections, and occasionally graver conditions which might also jeopardize the health of others, and be a menace to the community are detected and treated. Often students are relieved of imaginary diseases. In 1915 we found that 64% of the freshmen had errors of refraction, and our oculist wrote 700 prescriptions for proper glasses. The dental examination revealed that only 82 men and 56 women out of the whole 1513 entrant enrollment had normal teeth. Numerous other illustrations could be cited, such as postural defects, diseased tonsils, chest-diseases, flat feet, etc., etc. Enough has been said for the argument for compulsory medical examinations.

These entrants must have a satisfactory scar to show that they are properly immunized against smallpox, or submit to vaccination. This is a State law. Since 1901, when this law was established, there have been no cases of smallpox among the students. In 1915-16 there were 473 cowpox vaccinations. Typhoid inoculation is not a compulsory measure. However, 273 students voluntarily received the protection against typhoid infection.

Certainly safeguarding the health of the students has been achieved through all these agents. The University provides, through its department of hygiene, compulsory lecture courses in which the truths of preventive medicine, personal and community hygiene are taught, and the superstitions, vagaries of medicine, quackery, and other frauds are shattered and disclosed. All will concede this course to be of inestimable educational value.

A word as to the management of curative medicine as it is practiced at the infirmary: Here is a representative staff of medical men and women who have all a special training in their profession. Men and women who work in harmony, who are in sympathy with this health insurance movement, and who can contribute organized and economical medical service. By careful study of cases, consultation, and assistance from the various laboratory workers, a remarkable number of correct diagnoses are made. The same system that is practiced so successfully at the Massachusetts General Hospital under the direction of Dr. Cabot, and which is also being successfully carried out at St. Luke's Hospital in San Francisco. This is better known as group-medicine. The laity as well as the profession realize that only the very rich and the very poor receive the best type of curative treatment. Why then should not socialized medicine, which can be so successfully applied to college students and industrial plants, be applicable to the whole of society?

THE SAN DIEGO DIAGNOSTIC GROUP CLINIC.

(A Preliminary Report.)

ROBERT POLLOCK, M. D., San Diego, Cal.

This clinic, which was opened to the public on Saturday, February 17th, is the initial expression of an earnest desire on the part of a San Diego philanthropist to help the man of modest income (\$100.00 a month or less). Mr. E. W. Scripps, the owner of valuable newspaper properties in San Diego and many other American cities, proposes to have this class furnished with careful group diagnosis at a price within the means of the working man, Mr. Scripps paying all necessary deficits. To do this he has furnished and equipped a substantial building in an easily accessible residence neighborhood and placed it, through a board of five trustees, at the disposal of the local medical profession to plan and work out the details of a diagnostic clinic. Its staff, consisting of fifty members representing all of the recognized specialties, has been selected from the ranks of the County Medical Society. Its members serve in groups for a month at a time.

Patients are accepted for diagnosis only and must be referred by a registered physician. They are kept in the clinic for two or three days, or as long as is necessary to complete a diagnosis, when they are referred back to their physician, to whom is sent a composite of the diagnostic findings, and an outline of treatment suggested. Each physician after examining a patient commits his findings and conclusions to writing and these reports are discussed daily by the entire group on service. In this way an earnest endeavor is made to bring to light and correlate the underlying pathology of obscure problems in diagnosis represented in the patients that travel about from one doctor to another without receiving what they most desire. No member of the diagnostic staff is allowed to accept for treatment patients who have been examined by him within ninety days unless so requested by the patient's physician.

In the two weeks that the clinic has been open, twelve cases have been worked out, every one an interesting symptom complex, and the diagnostic group first assuming service is finding the work intensely interesting.

SYMPTOMATOLOGY OF HYPERTHYROIDISM.*

By HENRY H. LISSNER, M. D., Los Angeles, Cal.

It shall not be the purpose of this paper to take up the symptomatology of exophthalmic goitre but to consider the symptomatology of hyperthyroidism, and only speak of goitre and exophthalmus as concomitant symptoms of thyroid intoxication, since in recent years we have come to learn that not every case of so-called exophthalmic goitre showed the goitre and not infrequently the exophthalmus was

* Read before the annual meeting of the California State Medical Society, Fresno, Cal., April 19th, 1916.

absent, indeed it is to be regretted that the disease has often gone unrecognized because of the lack of this symptom, or the lack of a visible protrusion of the thyroid gland.

¹The overactive thyroid has been studied for the past 125 years by Morgagni, Parry and Elagini, then by Graves in 1835, Basedow in 1858; later Hirsch and Moebius, and more recently by Kocher, Klose, Plummer, the Mayos, Crile, etc. The symptomatology varied between the heart, the nervous system and intestinal toxins, until at the present writing we have the two main theories as expounded by Crile and Plummer, whom Frazier² quotes as follows: "Crile's idea is that Graves' disease is not a disease of a single organ or the result of some fleeting cause, but is a disease of the motor mechanism of man, the same mechanism that causes physical action and that expresses the emotions; its origin is in phylogeny, and its excitation is through some stimulatory emotion, intensely or repeatedly given, or some lowering of the threshold of the nerve receptions, thus establishing a pathologic interaction between the brain and the thyroid."

Plummer regards it as a form of thyrotoxicosis in which the toxin, whatever may be its nature, acts directly on the more vital organs, more notably the central nervous and vascular systems, and that the clinical picture is made more complex by the interaction of those organs whose functions have been directly disturbed by the toxins. Barker³ is of the opinion that the disease is not simply due to an over activity of a hypertrophic normal gland but is the result of an actual perversion of secretion in a gland pathologically altered. Lohman⁴ says that Roos and Oswald have shown that thyroglobulin, which is formed in the cells, is physiologically inactive until it becomes iodized by the blood. The excess of thyroid secretion may be said to produce a general stimulation of the peripheral nerves, and an increase in metabolism causing the breaking down of tissue proteids, especially those of the muscle.

"Hyperthyroidism⁵ is peculiarly a condition of the female during the period of greatest reproductive activity." The first evidence of the condition manifests itself at this time, and may continue even after the complete establishment of the menstrual flow. In fact many cases of so-called physiological hyperthyroidism at this period of life, go on to the true pathological state, or remain quiescent for years only to start again under favorable conditions, i. e., pregnancy, severe nerve shock, etc. At this stage the earliest symptom is the tachycardia, a pulse varying from 100 to 160. It is the opinion of some that a pulse of 100 is not sufficient to be classified as a tachycardia, but in given cases where such condition has been constant over a long period of time it is my opinion that it should be classified as such, and where no other pathological basis can be found to explain it a diagnosis of hyperthyroidism must be made

even in the absence of exophthalmus and goitre. The heart is usually somewhat dilated, the pulse beats are rather soft, the carotids jumping, there is a general increase in the precordial impulse, and over the entire heart is heard a systolic blowing murmur or hum, which according to Sahli⁶ is produced by the increased rapidity of the blood current. In the more advanced cases gallop rhythm and intensified heart beat are caused by stimulated cardiac action. Finally there develop pronounced myocardial degenerative changes with arrhythmia. The blood pressure varies between 120 to 130. The blood shows nothing of diagnostic importance.

Next to the heart, the nervous system is most frequently affected. Here again the earliest indications are met with and not infrequently a tachycardia, occurring in an individual who is showing the nervous symptoms of hyperthyroidism, is put down as a "nervous heart" and the cause is again overlooked. Bearing out this idea several papers have recently appeared which bring out the vagotonic and sympathetotonic phenomena of Graves' disease. Barker³ quotes Eppinger and Hess, C. Von Noorden Jr., Barker and Sladen and others, and is of the opinion that most cases show mixed symptoms; especially those with marked nervous and mental disturbances. Tremor is the most frequently discussed nervous symptom, and while it is not always present in the earliest cases in children, according to Pfaundler & Schlossman⁷ pseudochorea, as well as genuine chorea are often observed in the beginning but they disappear long before its termination. There are, however, certain other early symptoms of nervous or psychical origin which are most important and must be seriously considered since they are frequently put down as neurasthenic or even hysterical manifestations. Emotional instability, loss of memory, troublesome blushing, sweating, vertigo, melancholia, unusual happiness, in a word a lack of mental poise coupled with mental fatigue, characterizes some of the earlier nervous symptoms; in the later stages the patient's nervous condition may border on insanity. Insomnia though present is not constant except in advanced cases.

Goitre is absent in about 20% of the cases. It is of great interest to note how frequently the symptoms may be out of all proportion to the size of the struma. A very small and barely palpable tumor may cause the most profound symptoms, and vice versa. The goitre may light up suddenly, secondary to other infections, particularly about the mouth or throat according to Jameson⁸ and bring on an acute attack with exacerbation of all the symptoms. One sign of diagnostic importance is the presence of a bruit and thrill radiating down from the apex of the gland, all over the goitre. It must be distinguished from that of aortic disease. The symptoms will vary with the pathology of the gland, and I refer to the studies of Plummer and others of the Mayo clinic for more detailed illustration.

The eye symptoms of the goitre vary from none at all to pronounced exophthalmus. In the more advanced cases they are of course not difficult to

recognize. Von Graefe's, Moebius', Stellwag's and Dalrymple's signs may be elicited but are not constant. The most important is the exophthalmus, and various ideas are advanced as to its causation. Some of them are: that it is due to a weakness of the eye muscles; that a venous enlargement pushes the eyeball forward; that in marked cases there is an increase of retrobulbar fat, but none of these has been accepted above the others.

Loss of weight is in some instances present in the early course of the disease, and if taken with the symptom of tachycardia was usually considered to be more significant of tuberculosis. However, we are now more familiar with the varied types of excessive thyroid secretion and by careful observation soon place these cases in their proper class. This profound loss of weight is due to the loss of fat and albumen from the ever-present metabolic increase, as demonstrated by Magnes Levy⁷ (by instituting exact determinations of the respiratory gas changes). At the same time the gastro-intestinal digestion is undisturbed unless there are attacks of serous diarrhoea. Not infrequently there is an increase of appetite, also increased flow of saliva, and in early cases the bowels may move more than once daily.

Farrant⁹ has shown that thyroids obtained post-mortem from cases of acute and chronic intestinal obstruction have revealed no signs of hyperplasia, and concludes that there is no evidence to show that products of intestinal putrefaction have any action on the thyroid.

There still remains for our consideration an enormous group of symptoms directly or indirectly referable to hyperthyroidism, but lack of time prevents more than a casual mention of them. Muscular weakness is one of the early symptoms; then there are the skin changes, i. e., pigmentation, decrease in galvanic resistance (Vigouroux and Charcot) and sensations of heat; leukoplakia, alopecia, amenorrhoea, dysmenorrhoea, polyuria, albumenuria, alimentary glycosuria, emaciation and cachexia, while occurring in cases of moderate severity and advanced cases they are not characteristic symptoms.

In conclusion it must be evident from the foregoing limited discussion that the usual so-called cardinal symptoms of hyperthyroidism, i. e., tachycardia, exophthalmus and goitre, are not constantly present. Any two of them may be absent, and it is only by constantly bearing in mind the frequency of the early and often insidious onset of the condition at puberty, and by careful observation of the sometimes transitory character of the leading symptoms that we will increase our diagnostic acumen.

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TREATMENT OF SYPHILIS.

By GRANVILLE MAC GOWAN, M. D., Los Angeles.

(Concluded from Page 75, March Journal.)

Mark: "At present, I am using for the treatment of syphilis, salvarsan intramuscularly in the lumbar region as an initial treatment. This salvarsan is prepared in the following manner: The salvarsan is poured into a small salt mouth bottle containing glass beads. Just sufficient warm sterile water, distilled, is poured into the bottle to dissolve the salvarsan. To this is added two or three drops of a 1% alcoholic solution of phenolphthalein as an indicator. Following this a freshly prepared sterile 4% solution of sodium hydrate is added, drop by drop, and the contents shaken until the preparation is a faint salmon pink. It will be found that this will make in amount about eight to ten c.c. This is injected in the lumbar region, in the muscles on each side in divided doses. This whole procedure is preceded by the injection, one-half hour previously, of one-fourth grain morphin and 1/150 of atropin. It is practically painless. This is usually done in the hospital, the patient leaving the following morning and returning to work. In about one week, we begin intramuscular injections of mercury salicylate, or inunctions of mercury. Inunctions are given daily for six days, followed by a Turkish bath on the seventh day without inunction. Intramuscular injections of salicylate are given where they do not cause too much pain and are not objected to by the patient. In six months to one year later we give other salvarsan mercurial courses with tonics. They are continued for about two and one-half years, at the end of which time a rest is taken for six months and a Wassermann is taken; if negative, six months more are allowed to elapse, then a second Wassermann is taken. If still negative, the patient is requested to take twice a year about six weeks of mixed treatment, purely as a precautionary measure."

Chassignac: "You know it should not be the disease, or the cause of the disease you treat, but the patient; hence there can never be a routine. The new drugs I consider not tried long enough to know of the permanence of their effect. Salvarsan I use to control the symptoms, but prefer to use the old and new forms in the treatment, in combination, so as to give the benefit of all we know to the patient. The mercury, I prefer to administer in the form of soluble salts by the needle, or by inunctions. The salvarsan, I prefer to give by intramuscular injections. Until we have accumulated sufficient proof that the salvarsan can do what mercury can do and in a shorter time, I intend to continue advocating the three years' treatment. I am guided by the Wassermann, but do not consider it infallible in its indications, nor